



## **Guide for EMS: Quick Recognition of Toxic Agents in the Environment**

### **RADIATION**

**General:** It would be unlikely that only one person (victim) would be involved, more likely there would be multiple victims and there would likely be a difference in number of victims per area depending on distance from the probable source of the toxin. The further one is from the source, the fewer casualties one would expect. Pets, stray or wild animals might also be affected so it would be important to take note of these as well as human victims. There may be odors apparent. With the exception of mustard blistering agents and radiation agents, the effects would be seen immediately.

***It is imperative that the rescuer be protected from exposure!*** In all potential “toxin” exposures the law of distance applies, get the victim as far away from the source of exposure in the fastest time as possible! Generally the dose of the toxin falls off rapidly with distance. The treatment will be supportive and attention to the ABCs is important. Over treatment may produce problems as well as under treatment!

**Symptoms:** The initial symptoms, if existent, are not specific, anorexia (loss of appetite), nausea and vomiting, transient waves of skin erythema (skin reddening) and conjunctivitis may become apparent.

Generally effects are related to dose and timing. Radiation dose drops off markedly by distance, the effects at 2 feet from a source is  $\frac{1}{4}$  of that at the source, at 4 feet is  $\frac{1}{16}$ , at 8 feet  $\frac{1}{64}$ , etc. Most often the effects will be delayed. The early effects from a nuclear device are more related to the mechanical effects (blast and heat).

In a high dose exposure nausea, vomiting and diarrhea within minutes of the exposure with ataxia (uncoordinated gait), disorientation, shock and coma.

**Treatment:** Generally the victim is expected to be asymptomatic. Removal from the exposure source and attention to the physical injuries from the blast is paramount. Clothing should be removed with caution to avoid exposure to the rescuer and double bagged for determination of degree and type of exposure and then proper disposal. There is no specific antidote available in the field.

**For further help call:**

